Conrad
Powerline Adapter PL200D

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1 Introduction

This chapter gives an overview of the HomePlug technology and briefly introduces the adapter. Practical examples are listed at the end of the chapter.

1.1 What does HomePlug stand for?

HomePlug (“Inhouse Powerline”) is an intelligent, secure technology that lets you set up a home network easily, quickly and economically via your electrical wiring, without the need for complex and expensive dedicated cabling. The available performance and effort required for the installation also compares favourably to traditional methods—HomePlug technology now attains speeds you would expect from other LAN technologies.

1.1.1 Powerline Adapter PL200D

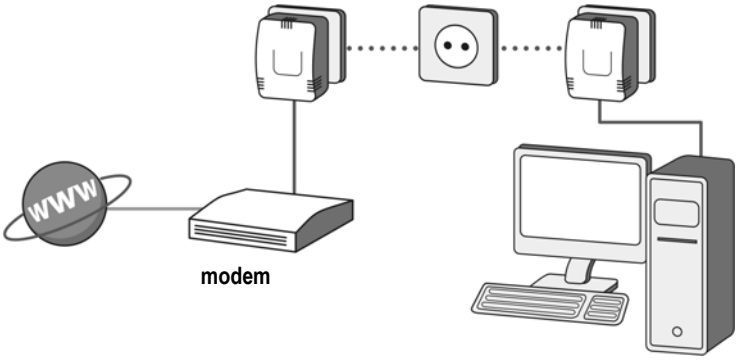
The adapter provides a transmission rate of up to 200 Mbps via the electrical wiring in the building. It also facilitates larger data transfer between the computers in your network via the electrical wiring.

Simple Installation

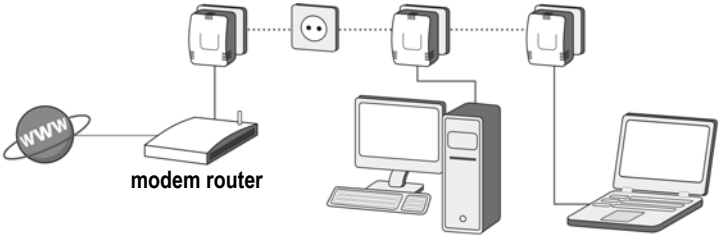
- Connect the adapter via the network cable to the computer or the respective network device.
- Connect the adapter to the electrical wiring
- As an option: for individual password allocation simply press the encryption button or install the configuration software on your computer
- That's it!

1.2 Practical examples

1.2.1 Internet solution for single users with Internet connection via a modem (network port)



1.2.2 Internet solution for multi-users with Internet connection via a modem router



2 Installation

This chapter describes the connection and display elements of the adapter and how to connect it.

2.1 Package contents

- Powerline Adapter PL200D
- Network cable
- Printed installation leaflet
- CD containing online documentation and configuration software

The manufacturer reserves the right to change the package contents without prior notice.

2.2 System requirements

- **Operating systems**: Windows XP (32 bit), Windows Vista or any other operating system with network support
- **Network connection**

Please note *that your computer or other device must feature a network adapter with an Ethernet port.*

2.3 Connection and display elements

The adapter is fitted with 3 control lamps (LEDs) as well as a network connection and an encryption button.

LEDs		Powerline Adapter PL200D
Power	green	Lit steady when the Powerline Adapter PL200D is ready for operation; flashes when the Powerline Adapter PL200D is in standby mode.
HomePlug	green	The network connection is suitable for HD video streaming; flashes when data is being transmitted.

LEDs		Powerline Adapter PL200D
	orange	The network connection is suitable for SD video streaming and online gaming; flashes when data is being transmitted.
	red	The network connection is suitable for simple data transfer and Internet access; flashes when data is being transmitted.
Ethernet		A 100 Mbps or 10 Mbps connection to the Ethernet network exists; flashes when data is being transmitted.

- Ethernet connection
  This is the connection point on the addapter for connecting it to a computer or another network device with the network cable (included).
- Encryption button
  Data encryption at the touch of a button; For more information on the functions of the encryption button, please see the chapter 'Configuring the HomePlug network'.

Please note *that all adapters which are connected to the electrical wiring, switch to energy-saving mode after approx. 20 minutes, if no active network device is connected to the Ethernet port. In energy-saving mode, the adapter cannot be accessed via the electrical wiring.*

2.4 Connecting the adapter

❶ Use the included network cable to connect the adapter to the network port of your running computer.

❷ Plug the adapter into a free electrical outlet.

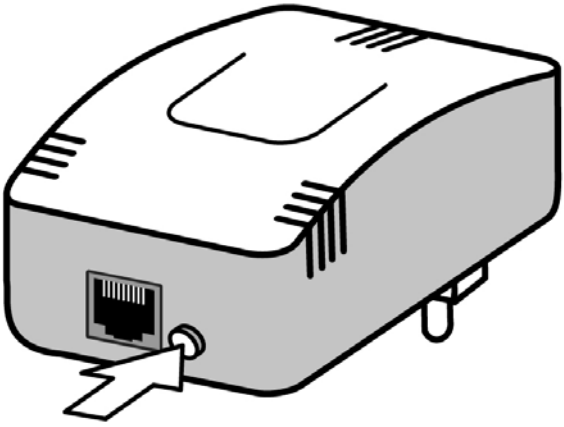
In order to connect multiple HomePlug devices into a self-contained, secure network, now continue with the installation of the configuration. For more information, refer to the chapter 'Configuring the HomePlug network'.

3 Configuring the HomePlug network

To set up custom encryption for your network—either using the encryption button or the configuration software.

3.1 Encrypting the HomePlug network at the touch of a button

To encrypt a Homeplug network simply press the encryption button that is located on the device. Pressing this button will encrypt your network with a randomly generated password.



Adapters cannot be configured while in Standby mode.

The following section contains exact instructions on the basis of possible network scenarios:

Encrypting a new Powerline Adapter PL200D network consisting of two adapters

*If the adapters are still in their factory default states, press the encryption buttons on both adapters for **at least ten seconds**, until the Power LED goes out and starts to flash.*

Once both adapters have been successfully connected, press each encryption button for **< 1 second within two minutes of one another**. That's it! Your HomePlug network is now protected against unauthorized access.

Expanding an existing Powerline Adapter PL200D network with a new Powerline Adapter PL200D

If you have already secured your existing Powerline Adapter PL200D network using the encryption button, use the same method to integrate other adapters. Once you have successfully connected the new Powerline Adapter PL200D, first press the encryption button of one of your network's existing adapters (**< 1 second**), then press the encryption button of your new Powerline Adapter PL200D (**< 1 second**) **within two minutes**. That's it! The new Powerline Adapter PL200D is now integrated in your network.

To integrate additional adapters in your network, repeat the above steps.

Excluding a Powerline Adapter PL200D from your network

To exclude a Powerline Adapter PL200D from an existing network, press its encryption button **for at least ten seconds**. The device will be assigned a new randomly generated password and will thus no longer be able to access the network. To integrate the adapter in a different Powerline Adapter PL200D network, follow the steps described above, depending on whether you are setting up a new network or adding the adapter to an existing one.

3.2 Encrypting the HomePlug network via the configuration software

To install the configuration software, insert the included CD-ROM in the CD drive of your computer. If autoplay is installed on your computer, the installation will start automatically. Otherwise, open the folder with the Windows Explorer by right-clicking on **Start** and selecting **Explorer** from the context menu. Double-click to start the installation wizard manually.

Upon successful installation, the configuration software can be found under **Start** --> **All programs** --> **HomePlug** --> **HomePlug Configuration Wizard.**

- **Scan for local adapter**
  After launching the wizard, it initially scans for the local adapter connected directly to your computer.

Please note: *You must connect every HomePlug device that you intend to integrate securely in your network directly to your computer for configuration.*

- **Assign a network password**
  In this step, select a network password that will apply to all adapters in your home network. The password must be used by all devices.

*The factory default password is "**HomePlug**". For security reasons, we recommend overwriting it and assigning a password of your own.*

- **Add further adapters**
  Connect each adapter, which is to be added to your network, to your computer and assign it a password.

4 Appendix

4.1 Technical data

	Powerline Adapter PL200D
Standards	Ethernet specification IEEE 802.3, IEEE 802.3x, IEEE 802.3u Auto MDI/X HomePlug AV
Protocols	CSMA/CD
Transfer rate	up to 200 Mbps
Transfer procedure	Asynchronous
Modulation	OFDM—84 carrier
Range	up to 200 m via power supply
Security	128-bit AES encryption via power supply
LEDs	Power HomePlug Ethernet
HomePlug connection	Standard power plug
Computer interface	RJ45
Power consumption	5 VA (max.) 3.3 VA (stand-by)
Power supply	Integrated power supply via power socket Rated voltage: 110 - 230 VAC Rated current: 0.05 A Rated frequency: 50 Hz
Environment	Humidity (non-condensing): 10-90% Storage: -25°C – 70°C Operation: 0°C – 40°C
System requirements	Ethernet interface Windows XP (32 bit), Windows Vista or any other operating system with network support
Warranty	2 years

4.2 Important safety instructions

All safety and operating instructions should be read and understood before using the device, and should be kept for future reference.

- Never open the device. There are no user-serviceable parts inside the device.

Do not try to service this product yourself! Contact qualified technicians each and every time your device needs maintenance. There is a risk of electric shock!

- Use the device in a dry location only.
- Always use the included network cable to connect the device.
- Do not insert any objects into the openings of the device.
- To disconnect the device from the power supply grid, pull the power plug.
- Do not keep the device in direct sunlight.
- Slots and openings on the case serve as ventilation. Never block or cover them.
- Never set up the device near a heater or radiator.
- The device should be located only where sufficient ventilation can be ensured.
- Disconnect the device from the power supply grid before cleaning. Use a moist towel to clean the device. Never use water, paint thinner, benzene, alcohol or other strong cleaning agents when cleaning the device, as these could damage the case.
- Never use the device with a power supply that does not meet the specifications provided on the rating plate. If you do not know what type of power supply you have at home, contact your dealer or energy supplier.
- In the event of damage, disconnect the device from the power supply grid and contact customer service. This applies, for example, if
    - the power cable or plug is damaged.
    - liquid has been spilled on the device or objects have fallen into the device.
    - the device has been exposed to rain or water.
    - the device does not work, even though the operating instructions have been followed properly.
    - the device's case is damaged.

4.3 Warranty conditions

The warranty is given to purchasers of the manufacturer's products in addition to the warranty conditions provided by law and in accordance with the following conditions:

1 Warranty coverage

a) The warranty covers the equipment delivered and all its parts. Parts will, at the manufacturer's sole discretion, be replaced or repaired free of charge if, despite proven proper handling and adherence to the operating instructions, these parts became defective due to fabrication and/or material defects. Alternatively, the manufacturer reserves the right to replace the defective product with a comparable product with the same specifications and features. Operating manuals and possibly supplied software are excluded from the warranty.

b) Material and service charges shall be covered by the manufacturer, but not shipping and handling costs involved in transport from the buyer to the service station and/or to the manufacturer.

c) Replaced parts become property of the manufacturer.

d) The manufacturer is authorized to carry out technical changes (e.g. firmware updates) beyond repair and replacement of defective parts in order to bring the equipment up to the current technical state. This does not result in any additional charge for the customer. A legal claim to this service does not exist.

2 Warranty period

The warranty period for this product is two years. This period begins at the day of delivery from the manufacturer's dealer. Warranty services carried out by the manufacturer do not result in an extension of the warranty period nor do they initiate a new warranty period. The warranty period for installed replacement parts ends with the warranty period of the device as a whole.

3 Warranty procedure

a) If defects appear during the warranty period, the warranty claims must be made immediately, at the latest within a period of 7 days.

b) In the case of any externally visible damage arising from transport (e.g. damage to the housing), the person carrying out the transportation and the sender should be informed immediately. On discovery of damage which is not externally visible, the transport company and the sender are to be immediately informed in writing, at the latest within 3 days of delivery.

c) Transport to and from the location where the warranty claim is accepted and/or the repaired device is exchanged, is at the purchaser's own risk and cost.

d) Warranty claims are only valid if a copy of the original purchase receipt is returned with the device. The manufacturer reserves the right to require the submission of the original purchase receipt.

4 Suspension of the warranty

All warranty claims will be deemed invalid

a) if the label with the serial number has been removed from the device,

b) if the device is damaged or destroyed as a result of acts of nature or by environmental influences (moisture, electric shock, dust, etc.),

c) if the device was stored or operated under conditions not in compliance with the technical specifications,

d) if the damage occurred due to incorrect handling, especially to non-observance of the system description and the operating instructions,

e) if the device was opened, repaired or modified by persons not contracted by the manufacturer,

f) if the device shows any kind of mechanical damage, or

g) if the warranty claim has not been reported in accordance with 3a) or 3b).

5 Operating mistakes

If it becomes apparent that the reported malfunction of the device has been caused by unsuitable hardware, software, installation or operation, the manufacturer reserves the right to charge the purchaser for the resulting testing costs.

6 Additional regulations

a) The above conditions define the complete scope of the manufacturer's legal liability.

b) The warranty gives no entitlement to additional claims, such as any refund in full or in part. Compensation claims, regardless of the legal basis, are excluded. This does not apply if e.g. injury to persons or damage to private property are specifically covered by the product liability law, or in cases of intentional act or culpable negligence.

c) Claims for compensation of lost profits, indirect or consequential detriments, are excluded.

d) The manufacturer is not liable for lost data or retrieval of lost data in cases of slight and ordinary negligence.

e) In the case that the intentional or culpable negligence of the manufacturer's employees has caused a loss of data, the manufacturer will be liable for those costs typical to the recovery of data where periodic security data back-ups have been made.

f) The warranty is valid only for the first purchaser and is not transferable.

g) The court of jurisdiction is located in Aachen, Germany in the case that the purchaser is a merchant. If the purchaser does not have a court of jurisdiction in the Federal Republic of Germany or if he moves his domicile out of Germany after conclusion of the contract, the manufacturer's court of jurisdiction applies. This is also applicable if the purchaser's domicile is not known at the time of institution of proceedings.

h) The law of the Federal Republic of Germany is applicable. The UN commercial law does not apply to dealings between the manufacturer and the purchaser.